



St. Michael Catholic Primary and Nursery School

Subject: Science

Whole School Overview of Science



Working Scientifically Years 1 & 2	Working Scientifically Years 3 & 4	Working Scientifically Years 5 & 6
• asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions	• asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings	• planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • using test results to make predictions to set up further comparative and fair tests • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • identifying scientific evidence that has been used to support or refute ideas or arguments
Reception		



St. Michael Catholic Primary and Nursery School

Subject: Science

Whole School Overview of Science



(Understanding the World)					
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
All about me Children will learn how to name their Body parts, explore their sense, talk about their likes and dislike. They will draw Self-portraits explore their Family tree and explore their own time line	Martha Maps it out Where do I live Children will be exploring the area we live in; they will look at buildings and landmarks around our local area. As well as this they will create maps and junk models of our local area.	Animals Children will look at our endangered world, they will learn about extinction, habitats and wildlife. They will explore how they can take care of their planet through recycling and making thoughtful life choices. Through this they will also look at people who are trying to preserve our planet and care for the wildlife and nature.	Plants Children will learn about plants and trees. They will learn the different parts of a plant, how to care for plants and flowers and name a variety of different plants and trees.	Transport around the world and from the past The children will be looking at different types of transport and comparing them to other countries from around the world. They will be exploring the transport from the past and look how it has changed and why it has changed. They will experiment with floating and sinking and forces to make vehicles travel fast and slow.	
Year 1					
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Seasonal Changes To observe changes across the 4 seasons, observe and describe weather associated with the seasons and how day length varies.					
Everyday Materials LO: To distinguish between an object and	Everyday Materials LO: To distinguish between an object and	Animals including Humans	Animals including Humans	Plants LO: To identify and name a variety of	Plants LO: To identify and name a variety of



St. Michael Catholic Primary and Nursery School

Subject: Science

Whole School Overview of Science



the material from which it is made LO: To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock LO: To describe the simple physical properties of a variety of everyday materials LO: To be able to compare and group together a variety of everyday materials on the basis of their simple physical properties	the material from which it is made LO: To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock LO: To describe the simple physical properties of a variety of everyday materials LO: To be able to compare and group together a variety of everyday materials on the basis of their simple physical properties	LO: To name and group, fish, amphibians, reptiles, birds and mammals. LO: To identify and name a variety of common animals that are carnivores, herbivores and omnivores. LO: To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals) LO: To identify, name, draw and label the basic parts of the human body and say which part of the body associated with each sense.	LO: To name and group, fish, amphibians, reptiles, birds and mammals. LO: To identify and name a variety of common animals that are carnivores, herbivores and omnivores. LO: To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals) LO: To identify, name, draw and label the basic parts of the human body and say which part of the body associated with each sense.	common wild and garden plants, including deciduous and evergreen trees LO: To identify and describe the basic structure of a variety of common flowering plants, including trees Seasonal Changes LO: To observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies	common wild and garden plants, including deciduous and evergreen trees LO: To identify and describe the basic structure of a variety of common flowering plants, including trees Seasonal Changes LO: To observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies
Year 2					
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6



St. Michael Catholic Primary and Nursery School

Subject: Science

Whole School Overview of Science



Animals including humans	Uses of everyday Materials	Living Things and their Habitats	Living Things and their habitats	Plants	Animals including humans
LO: To find out about and describe the basic needs of animals, including humans, for survival (water, food and air) LO: To describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	LO: To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. LO: To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	LO: To describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. LO: To explore and compare the differences between things that are living, dead, and things that have never been alive	LO: To identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other LO: To identify and name a variety of plants and animals in their habitats, including microhabitats	LO: To observe and describe how seeds and bulbs grow into mature plants. LO: To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	LO: To notice that animals, including humans, have offspring, which grow into adults. LO: To describe and compare the structure of a variety of common animals.
Year 3					
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Light	Plants	Humans and Animals		Rocks and Soil	Forces and Magnets
LO: To recognise that they need light in order to see things and that	LO: To identify and describe the functions of different parts of flowering plants: roots,	LO: To identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat		LO: To compare and group together different kinds of rocks on the basis of their	LO: To compare how things move on different surfaces



St. Michael Catholic Primary and Nursery School

Subject: Science

Whole School Overview of Science



dark is the absence of light LO: To notice that light is reflected from surfaces LO: To recognise that light from the sun can be dangerous and that there are ways to protect their eyes LO: To recognise that shadows are formed when the light from a light source is blocked by an opaque object LO: To find patterns in the way that the size of shadows change.	stem/trunk, leaves and flowers LO: To explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant LO: To investigate the way in which water is transported within plants LO: To explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	LO: To identify that humans and some other animals have skeletons and muscles for support, protection and movement. LO: introduce the main body parts associated with the skeleton and muscles, finding out how different parts of the body have special functions.	appearance and simple physical properties LO: To describe in simple terms how fossils are formed when things that have lived are trapped within rock LO: To recognise that soils are made from rocks and organic matter.	LO: To notice that some force need contact between two objects, but magnetic forces can act at a distance LO: To observe how magnets attract or repel each other and attract some materials and not others LO: To compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials LO: To describe magnets as having two poles LO: To predict whether two magnets will
---	---	---	---	--



St. Michael Catholic Primary and Nursery School

Subject: Science

Whole School Overview of Science



					attract or repel each other, depending on which poles are facing.
Year 4					
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Animals including Humans LO: To describe the simple functions of the basic parts of the digestive system in humans. LO: To identify the different types of teeth in humans and their simple functions. LO: To construct and interpret a variety of food chains, identifying producers, predators and prey.	States of Matter LO: To compare and group materials together, according to whether they are solids, liquids or gases LO: To observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) LO: To identify the part played by evaporation and condensation in the water cycle and associate the rate of	Sound LO: To identify how sounds are made, associating some of them with something vibrating. LO: To recognise that vibrations from sounds travel through a medium to the ear. LO: To find patterns between the pitch of a sound and features of the object that produced it. LO: To find patterns between the volume of a sound and the strength of the	Living things and their habitats LO: To recognise that living things can be grouped in a variety of ways. LO: To explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. LO: To recognise that environments can change and that this can sometimes pose dangers to living things.	Electricity LO: To identify common appliances that run on electricity. LO: To construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers LO: To identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery LO: To recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit LO: To recognise some common conductors and insulators, and associate metals with being good conductors	



St. Michael Catholic Primary and Nursery School

Subject: Science

Whole School Overview of Science



	evaporation with temperature.	vibrations that produced it. LO: To recognise that sounds get fainter as the distance from the sound source increases.			
Year 5					
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Properties and Changes of Material LO: To compare and group together everyday materials on the basis of their properties. LO: To know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution LO: To use knowledge of solids, liquids and gases to decide how mixtures might be separated. LO: To give reasons, based on evidence for the particular uses of everyday materials. LO: To demonstrate that dissolving, mixing and changes of state are reversible changes		Earth and Space LO: To describe the movement of the Earth, and other planets, relative to the Sun in the solar system LO: describe the movement of the Moon relative to the Earth LO: describe the Sun, Earth and Moon as approximately spherical bodies	Living things and their habitats (Reproduction) LO: describe the life process of reproduction in some plants and animals. Living things and their habitats LO: describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird	Animals including humans LO: To describe the changes as humans develop to old age. Non- statutory Pupils should draw a timeline to indicate stages in the growth and development of humans. They should learn about the changes experienced in puberty. Pupils could work scientifically by researching the	Forces LO: To describe the movement of the Earth, and other planets, relative to the Sun in the solar system LO: describe the movement of the Moon relative to the Earth LO: describe the Sun, Earth and Moon as approximately spherical bodies



St. Michael Catholic Primary and Nursery School

Subject: Science

Whole School Overview of Science



		LO: use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.		gestation periods of other animals and comparing them with humans; by finding out and recording the length and mass of a baby as it grows	LO: use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.
Year 6					
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Animals including humans LO: To identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. LO: To recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function LO: To describe the ways in which	Evolution and Inheritance LO: To recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. LO: To recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.	Light LO: To recognise that light appears to travel in straight lines. LO: To use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. LO: To explain that we see things because light travels from light sources to our eyes or from light sources to	Living things and their habitats LO: To describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals LO: To give reasons for classifying plants and animals based on specific characteristics	Electricity LO: To associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. LO: To compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. LO: To use recognised symbols when representing a simple circuit in a diagram	



St. Michael Catholic Primary and Nursery School

Subject: Science

Whole School Overview of Science



nutrients and water are transported within animals, including humans.	LO: To identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution	objects and then to our eyes. LO: To use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them		
---	--	--	--	--